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2 **WHAT IS CLAIMED IS:**

3
4 1. A method for determining information about a consumer prior to enabling the
5 vending of a good or service from a machine, comprising:

6 (a) receiving a form containing information about the consumer at the
7 machine;

8 (b) optically analyzing the form to electronically determine information about
9 the consumer; and

10 (c) enabling the vend on the basis of the information.
11

12 2. The method of claim 1, wherein the form is selected from the group consisting of
13 an identification card, a driver's license, a social security card, and a passport.
14

15 3. The method of claim 1, wherein optically analyzing the form comprises scanning
16 the form to produce an image and comparing the image to image templates.
17

18 4. The method of claim 3, wherein the image templates are transmitted to the
19 machine by a system.
20

21 5. The method of claim 1, wherein the determined information is selected from the
22 group consisting of the consumer's age, date of birth, name, address, identification
23 number, driver's license number, social security number, and passport number.
24

25 6. The method of claim 5, wherein vending is enabled if the consumer is of a
26 suitable age to purchase the good or service.
27

28 7. The method of claim 1, wherein the machine is selected from the group consisting
29 of a vending machine, an automatic teller machine, a cash register, and a gas pump.
30

1 8. A machine for distributing goods or services to consumers, comprising an optical
2 scanning unit, wherein the optical scanning unit receives and optically scans a form
3 containing information about the consumer to electronically determine the information
4 about the consumer contained on the form and to enable the vending of goods or services
5 on the basis of the information.

6
7 9. The machine of claim 8, wherein the form is selected from the group consisting of
8 an identification card, a driver's license, a social security card, and a passport.

9
10 10. The machine of claim 8, further comprising image templates stored within the
11 optical scanning unit, and wherein determining information about the consumer
12 comprises producing an image of the form and comparing the image to the image
13 templates.

14
15 11. The machine of claim 10, wherein the image templates are transmitted to the
16 machine by a system.

17
18 12. The machine of claim 8, wherein the determined information is selected from the
19 group consisting of the consumer's age, date of birth, name, address, identification
20 number, driver's license number, social security number, and passport number

21
22 13. The machine of claim 12, wherein vending is enabled if the consumer is of a
23 suitable age to purchase the good or service.

24
25 14. The machine of claim 8, wherein the machine is selected from the group
26 consisting of a vending machine, an automatic teller machine, a cash register, and a gas
27 pump.

28
29 15. An optical scanning unit, comprising:

30 (a) a form reader for optically producing an image of a form containing
31 information about a person; and

(b) stored templates to assist in analyzing the image to electronically determine information about the person.

16. The optical scanning unit of claim 15, wherein the optical scanning unit is connectable to a machine, and wherein the information determined about the person is used to enable the vending of goods or services from the machine.

17. The optical scanning unit of claim 16, wherein the machine is selected from the group consisting of a vending machine, an automatic teller machine, a cash register, and a gas pump.

18. The optical scanning unit of claim 16, wherein the information is selected from the group consisting of the person's age, date of birth, name, address, identification number, driver's license number, social security number, and passport number.

19. The optical scanning unit of claim 15, wherein the optical scanning unit is connectable to a system, and wherein the information determined about the person is used by the system to provide further information about the person.

20. The optical scanning unit of claim 19, wherein the further information is selected from the group consisting of credit information, information regarding honoring of checks, driver's license validity, criminal record information, immigration status, or fugitive status.

21. The optical scanning unit of claim 15, wherein the form is selected from the group consisting of an identification card, a driver's license, a social security card, and a passport.

22. The optical scanning unit of claim 15, wherein the form reader further comprises a magnetic head for reading magnetically encoded information on a form.

- 1 23. The optical scanning unit of claim 15, wherein the form reader includes a charge
2 coupled device for optically producing the image.
3
- 4 24. The optical scanning unit of claim 15, wherein the image includes a bar code.
5
- 6 25. An optical scanning unit, comprising:
7 (a) a form reader for optically producing an image of a form containing
8 security indicia for verifying the validity of the form; and
9 (b) stored templates to assist in analyzing the security indicia to electronically
10 determine information indicative of the validity of the form.
11
- 12 26. The optical scanning unit of claim 25, wherein the optical scanning unit is
13 connectable to a machine, and wherein the information determined about the person is
14 used to enable the vending of goods or services from the machine.
15
- 16 27. The optical scanning unit of claim 26, wherein the machine is selected from the
17 group consisting of a vending machine, an automatic teller machine, a cash register, and a
18 gas pump.
19
- 20 28. The optical scanning unit of claim 25, wherein the form is selected from the group
21 consisting of an identification card, a driver's license, a social security card, and a
22 passport.
23
- 24 29. The optical scanning unit of claim 25, wherein the form reader further comprises
25 a magnetic head for reading magnetically encoded information on a form.
26
- 27 30. The optical scanning unit of claim 25, wherein the form reader includes a charge
28 coupled device for optically producing the image.
29
- 30 31. The optical scanning unit of claim 25, wherein the security indicia comprises a
31 hologram.

1
2 32. The optical scanning unit of claim 25, wherein the security indicia comprises a
3 bar code.

4
5 33. The optical scanning unit of claim 25, wherein the security indicia comprises a
6 validation seal.

7
8 34. A system, comprising:

9 (a) at least one terminal containing a form reader capable of taking an optical
10 image of a consumer identification form; and

11 (b) at least one memory device within the at least one terminal for storing
12 templates to assist in the analysis of the optical image to determine
13 consumer information therefrom.

14
15 35. The system of claim 34, further comprising a server in communication with the at
16 least one terminal.

17
18 36. The system of claim 35, wherein the server provides the templates to the memory
19 device.

20
21 37. The system of claim 35, wherein the server receives data from the terminal.

22
23 38. The system of claim 37, wherein the data is selected from the group consisting of
24 DEX information, information concerning the contents of the terminal, consumer account
25 information, and consumer credit card information.

26
27 39. The system of claim 34, wherein the at least one terminal is a vending machine,
28 and further comprising an enabling circuit for receiving the consumer information to
29 enabling the vending of goods or services from the terminal.

30

1 40. The system of claim 34, wherein the consumer information is selected from the
2 groups consisting of the consumer's age, date of birth, name, address, identification
3 number, driver's license number, social security number, and passport number.

4
5 41. The system of claim 34, wherein the at least one terminal is a gas pump, and
6 further comprising an enabling circuit for receiving the consumer information and
7 enabling the vending of gasoline from the terminal accordingly.

8
9 42. The system of claim 41, wherein the consumer information comprises information
10 indicative of the validity of the consumer's driver's license.

11
12 43. The system of claim 35, further comprising at least one integrated system in
13 communication with the server.

14
15 44. The system of claim 43, wherein the integrated system is selected from the group
16 consisting of credit card databases, governmental law enforcement databases, consumer
17 reporting agency databases, and financial services system databases.

18
19 45. The system of claim 35, wherein the server is capable of communicating with a
20 plurality of consumer accounts accessible in accordance with the consumer information.

21
22 46. The system of claim 35, wherein the system comprises at least two different types
23 of terminals.

24
25 47. The system of claim 46, wherein the types of terminals are selected from the
26 group consisting of a vending machine, an automatic teller machine, a cash register, and a
27 gas pump.

28
29 48. A method for accessing at least one consumer account using a system,
30 comprising:

31 (a) receiving a form containing information about a consumer into the system;

(b) optically analyzing the form to electronically determine information about the consumer; and

(c) using the information to electronically access at least one consumer account in communication with the system.

49. The method of claim 48, wherein the form is selected from the group consisting of an identification card, a driver's license, a social security card, and a passport.

50. The method of claim 48, wherein optically analyzing the form comprises scanning the form to produce an image and comparing the image to image templates.

51. The method of claim 48, wherein the determined information is selected from the group consisting of the consumer's age, date of birth, name, address, identification number, driver's license number, social security number, and passport number.

52. The method of claim 48, further comprising charging a purchase price of a good or service provided by the system to the accessed account.

53. The method of claim 48, wherein the information is used to access a plurality of consumer accounts, and further comprising allowing the consumer to select one of the plurality of accounts.

54. The method of claim 53, further comprising charging a purchase price of a good or service provided by the system to the selected account.

55. The method of claim 53, wherein at least one of the plurality of account comprises a credit card account.

56. The method of claim 48, further comprising enabling the consumer to enter a private key prior to accessing the at least one consumer account.

1 57. The method of claim 48, wherein the account resides on an integrated system in
2 communication with the system.

3
4 58. A method for allowing a consumer to pay for a good or service having a purchase
5 price at a vending machine using a system, the method comprising:

6 (a) receiving at the system consumer account registration information to
7 establish at least one electronic consumer account accessible by the
8 system;

9 (b) receiving a form containing information about the consumer into the
10 vending machine;

11 (c) optically analyzing the form to electrically determine information about
12 the consumer; and

13 (d) using the information to electronically charge the purchase price from the
14 at least one consumer account.

15
16 59. The method of claim 58, wherein establishing an electronic consumer account
17 comprises communicating with the system using a computerized user interface.

18
19 60. The method of claim 58, wherein the form is selected from the group consisting
20 of an identification card, a driver's license, a social security card, and a passport.

21
22 61. The method of claim 58, wherein optically analyzing the form comprises scanning
23 the form to produce an image and comparing the image to image templates.

24
25 62. The method of claim 58, wherein the determined information is selected from the
26 group consisting of the consumer's age, date of birth, name, address, identification
27 number, driver's license number, social security number, and passport number.

28
29 63. The method of claim 58, wherein the at least one consumer account comprises a
30 credit card account.

31

1 64. The method of claim 58, wherein the at least one account resides on an integrated
2 system in communication with the system.

3
4 65. The method of claim 58, wherein the at least one account comprises a plurality of
5 accounts, and further comprising allowing the consumer to select one of the plurality of
6 accounts prior to step (d).

7
8 66. The method of claim 58, further comprising enabling the consumer to enter a
9 private key prior to charging the at least one consumer account.

10
11 67. A method, implementable on a system, for making a plurality of electronic
12 consumer accounts accessible by a single consumer identification form, comprising:

- 13 (a) associating each account with information about the consumer;
14 (b) enabling the receipt of the form at a terminal in the system;
15 (c) optically analyzing the form to electrically determine the information
16 about the consumer; and
17 (d) using the determined information to access the plurality of consumer
18 accounts.

19
20 68. The method of claim 67, further comprising registering the plurality of consumer
21 accounts with the system.

22
23 69. The method of claim 68, wherein registering the plurality of consumer accounts
24 comprises communicating with the system using a computerized user interface.

25
26 70. The method of claim 67, further comprising enabling the consumer to enter a
27 private key prior to accessing the plurality of consumer accounts.

28
29 71. The method of claim 67, wherein the form is selected from the group consisting
30 of an identification card, a driver's license, a social security card, and a passport.
31

1 72. The method of claim 67, wherein optically analyzing the form comprises scanning
2 the form to produce an image and comparing the image to image templates.

3
4 73. The method of claim 67, wherein the determined information is selected from the
5 group consisting of the consumer's age, date of birth, name, address, identification
6 number, driver's license number, social security number, and passport number.

7
8 74. The method of claim 67, wherein the at least one consumer account comprises a
9 credit card account.

10
11 75. The method of claim 67, wherein the at least one account resides on an integrated
12 system in communication with the system.

13
14 76. The method of claim 67, further comprising allowing the consumer to select one
15 of the plurality of accounts.

16
17 77. The method of claim 67, further comprising enabling the consumer to enter a
18 private key to charge at least one consumer account.

19
20 78. A system for accessing at least one consumer account registered with a system,
21 comprising:

22 (a) at least one terminal for receiving a form containing information about a
23 consumer and for producing an optical image of the form;

24 (b) a program for analyzing the optical image and determining consumer
25 information therefrom; and

26 (c) at least one integrated system in communication with the system which
27 contains at least one consumer account, wherein the at least one consumer
28 account is accessible using the determined consumer information.

29
30 79. The system of claim 78, further comprising a user interface to allow the at least
31 one consumer account to be preregistered with the system.

1
2 80. The system of claim 78, wherein the form is selected from the group consisting of
3 an identification card, a driver's license, a social security card, and a passport.
4

5 81. The system of claim 78, wherein the program compares the image to image
6 templates.
7

8 82. The system of claim 78, wherein the determined information is selected from the
9 group consisting of the consumer's age, date of birth, name, address, identification
10 number, driver's license number, social security number, and passport number.
11

12 83. The system of claim 78, wherein the at least one consumer account comprises a
13 credit card account.
14

15 84. The system of claim 78, further comprising a server disposed between and in
16 communication with the at least one terminal and the at least one integrated system.
17

18 85. The system of claim 78, wherein the system comprises at least two different types
19 of terminals.
20

21 86. The system of claim 85, wherein the types of terminals are selected from the
22 group consisting of a vending machine, an automatic teller machine, a cash register, and a
23 gas pump.
24

25 87. A method for determining information about an individual using a form,
26 comprising:

- 27 (a) receiving the form at a first system;
28 (b) optically analyzing the form to determine first information about the
29 individual;
30 (c) transmitting the first information to a second system containing second
31 information about the individual;

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- (d) using the first information to access the second information; and
- (e) receiving the second information.

88. The method of claim 87, wherein the form is selected from the group consisting of an identification card, a driver's license, a social security card, and a passport.

89. The method of claim 87, wherein optically analyzing the form comprises scanning the form to produce an image and comparing the image to image templates.

90. The method of claim 87, wherein the first information is selected from the group consisting of the individual's age, date of birth, name, address, identification number, driver's license number, social security number, and passport number.

91. The method of claim 87, wherein the second information is selected from the group consisting of credit information, information regarding honoring of checks, driver's license validity, criminal record information, immigration status, and fugitive status.

92. The method of claim 87, wherein the second system is an integrated system in communication with the first system.

93. The method of claim 87, wherein the first system includes a terminal for receiving the form.

94. A method for verifying the identity of a person using a terminal, comprising:

- (a) receiving optical image data from a first form at the terminal;
- (b) analyzing the optical image data to determine first information about the person;
- (c) receiving magnetic data from a magnetic strip on a second form at the terminal;

(d) analyzing the magnetic data to determine second information about the person; and

(e) comparing the first information and the second information to verify the identity of the person.

95. The method of claim 94, wherein the first form or second form is selected from the group consisting of an identification card, a driver's license, a credit card, a social security card, and a passport.

96. The method of claim 94, wherein the first information or the second information is selected from the group consisting of the person's age, date of birth, name, address, identification number, driver's license number, social security number, and passport number.

97. The method of claim 94, further comprising electronically enabling a purchase at the terminal if a match occurs between the first information and the second information when compared.

98. The method of claim 94, wherein the optical image data comprises a bar code.

99. A method for verifying the identity of a person using a terminal and a form, the form including a magnetic strip, comprising:

(a) receiving both optical image data from the form and magnetic data from the magnetic strip on the form at the terminal;

(b) analyzing the optical image data to determine first information about the person;

(c) analyzing the magnetic data to determine second information about the person; and

(d) comparing the first information and the second information to verify the identity of the person.

1 100. The method of claim 99, wherein the form is selected from the group consisting
2 of an identification card, a driver's license, a credit card, a social security card, and a
3 passport.

4
5 101. The method of claim 99, wherein the first information or the second information
6 is selected from the group consisting of the person's age, date of birth, name, address,
7 identification number, driver's license number, social security number, and passport
8 number.

9
10 102. The method of claim 99, further comprising electronically enabling a purchase at
11 the terminal if a match occurs between the first information and the second information
12 when compared.

13
14 103. The method of claim 99, wherein the optical image data comprises a bar code.

15
16 104. A system, comprising:

- 17 (a) at least one terminal containing a form reader capable of taking an optical
18 image of a form containing personal information to determine indicia
19 indicative of the identity of the person;
20 (b) a server in communication with the at least one terminal for receiving the
21 indicia; and
22 (c) an integrated system in communication with the server for receiving the
23 indicia from the server and providing in return information concerning the
24 person.

25
26 105. The system of claim 104, wherein the at least one terminal is a vending machine,
27 and wherein the returned information is used to enable vending from the vending
28 machine.

- 1 106. The system of claim 104, wherein the at least one terminal is a gas pump, and
2 wherein the returned information includes information concerning the validity of the
3 person's drivers license.
4
- 5 107. The system of claim 106, wherein the information concerning the validity of the
6 person's driver's license is used to enable the vending of gasoline from the gas pumps.
7
- 8 108. The system of claim 104, wherein the integrated system comprises a database
9 having immigration data, and wherein the returned information includes information
10 concerning the person's immigration status.
11
- 12 109. The system of claim 104, wherein the integrated system comprises a database
13 containing information about the person's credit, and wherein the returned information
14 includes information concerning the person's credit status.
15
- 16 110. The system of claim 104, wherein the form is selected from the group consisting
17 of an identification card, a driver's license, a social security card, and a passport.
18
- 19 111. The system of claim 104, wherein the indicia is selected from the group consisting
20 of the person's age, date of birth, name, address, identification number, driver's license
21 number, social security number, and passport number.
22
- 23 112. The system of claim 104, wherein the integrated system is selected from the group
24 consisting of credit card databases, governmental law enforcement databases, consumer
25 reporting agency databases, and financial services system databases.
26
- 27 113. The system of claim 104, further comprising image templates to be used in
28 determining the indicia.
29
- 30 114. A device for receiving a form, comprising:

(a) a magnetic head for reading magnetically encoded information on the form; and

(b) an optical receiver for receiving an image of the form.

115. The device of claim 114, wherein the device is connectable to a machine for vending of goods or services.

116. The device of claim 114, wherein the form is selected from the group consisting of an identification card, a driver's license, a social security card, and a passport.

117. The device of claim 114, wherein the device includes a charge coupled device for receiving the image.

118. The device of claim 114, wherein the image is selected from the group consisting of a hologram, a validation seal, and a bar code.

119. The device of claim 114, further comprising a memory for storing image template used in analyzing the image of the form.

120. A method for optically analyzing a test image in a system containing memory, comprising:

- (a) storing a test image $D(i,j)$ in a first memory;
- (b) storing K templates $T_k(i,j)$, each representative of a character, in a second memory;
- (c) adjusting the contrast of the K templates to match the contrast of the test image $D(i,j)$;
- (d) electronically positioning the test image relative to each template to calculate a minimum least squares difference between the test image and each template;
- (e) storing the minimum least squares difference for each template in a third memory; and

- (f) selecting the template with the smallest minimum least squares difference to determine the test image.

121. The method of claim 120, wherein $T_k(i,j)$ is equal to either a logical '1' or a logical '0'.

122. A method for optically analyzing a test image in a system containing memory, comprising:

- (a) storing a test image $D(i,j)$ in a first memory;
- (b) storing K templates $T_k(i,j)$, each representative of a character, in a second memory, each template having respective vertical and horizontal dimensions of m_k and n_k ;
- (c) electronically positioning the test image relative to each template by offsets r and s to calculate a minimum least squares difference $dist_k(r,s)$ between the test image and each template in accordance with the following equation:

$$dist_k(r,s) = \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} (D(r+i, s+j) - [\alpha T_k(i,j) + \beta])^2 ;$$

where α and β are dependent upon both $D(i,j)$ and $T_k(i,j)$;

- (d) storing the minimum least squares difference for each template in a third memory; and
- (e) selecting the template with the smallest minimum least squares difference to determine the test image.

123. The method of claim 122, wherein α and β are calculated in accordance with the following equations:

$$\alpha = \frac{m_k n_k A - BC}{\Delta}$$

$$\beta = \frac{\Omega C - AB}{\Delta}$$

where

$$A = \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} D(r+i, s+j) T_k(i, j)$$

$$B = \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} T_k(i, j)$$

$$C = \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} D(r+i, s+j)$$

$$\Omega = \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} T_k^2(i, j)$$

$$\Pi = \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} D^2(r+i, s+j)$$

$$\Delta = m_k n_k \Omega - B^2$$

124. The method of claim 122, wherein $T_k(i, j)$ is equal to either a logical '1' or a logical '0'.

125. The method of claim 122, wherein only P elements of the templates are used when calculating the minimum least squares difference in accordance with the following equation:

$$dist_k(r, s | \alpha, \beta) = \sum_{p=1}^P \left(D(r+i_p, s+j_p) - [\alpha T_k(i_p, j_p) + \beta] \right)^2.$$

126. A method for generating a template $T(i, j)$ representative of a character in a system containing memory, comprising:

- (a) scanning N of examples of the character to produce a plurality of example images $A_N(i, j)$ representative of the character;
- (b) storing the example images in a first memory;
- (c) determining an offset (r_k, s_k) for each example image to bring the images into alignment with each other;
- (d) calculating the template in accordance with the following equation:

$$T(i, j) = \frac{1}{N} \sum_{k=1}^N A_k(r_k + i, s_k + j); \text{ and}$$

(e) storing the template in a second memory.

127. The method of claim 126, wherein determining the offset for each template involves computation of the minimum distance in accordance with the following equation:

$$dist_k(r, s) = \sum_{k=1}^N \sum_{i=1}^{m_k} \sum_{j=1}^{n_k} (T(i, j) - A_k(r_k + i, s_k + j))^2.$$

128. The method of claim 126, wherein the form is selected from the group consisting of an identification card, a driver's license, a social security card, and a passport.

129. A method, implementable on a system containing data, for analyzing a form containing a form header and at least one cluster which contains at least one element, comprising:

- (a) scanning the form to create a computerized optical image of the form;
- (b) electronically determining the form type by comparing the optical image of the form header with form header template data associated with the form type;
- (c) using offset data associated with the form type to determine the location of a cluster on the form; and
- (d) assessing at least one element within the cluster by comparing the element to character template data associated with the form type.

130. The method of claim 129, wherein step (b) further comprising using form header origin data associated with the form type when determining the form type.

131. The method of claim 129, further comprising, after step (b), determining a form header origin for the optical image.

132. The method of claim 131, wherein the form header origin is used in association with the offset data to determine the location of the cluster in step (c).

1
2 133. The method claim 129, wherein step (d) includes using a pattern specification
3 associated with the form type, and wherein the pattern specification is indicative of the
4 structure of the elements and references the character template data.

5
6 134. The method of claim 129, wherein the cluster includes a cluster header, and
7 wherein determining the location of the cluster comprises comparing the optical image of
8 the cluster header with cluster header template data associated with the form type.

9
10 135. The method of claim 129, wherein the character template data is selected from the
11 group consisting of alphabetical template data and numerical template data.

12
13 136. The method of claim 129, wherein the form is selected from the group consisting
14 of an identification card, a driver's license, a social security card, and a passport.

15
16 137. A method, implementable on a system containing data, of analyzing a form to
17 create an optical template file for the form, the form containing a form header, at least
18 one cluster, and at least one element within the cluster, comprising:

- 19 (a) optically scanning a form to create an image file;
20 (b) storing a portion of the image file containing the form header as form
21 header template data associated with the optical template file;
22 (c) determining, from the image file, the origin of the form header, and storing
23 the form header origin data in association with the optical template file;
24 (d) determining, from the image file, the cluster origin for at least one cluster,
25 and storing the cluster origin data in association with the optical template
26 file; and
27 (e) determining, from the image file, the element origin of at least one
28 element within the cluster and storing the element origin data in
29 association with the optical template file.
30

1 138. The method of claim 137, wherein steps (a) through (e) are repeated for several
2 forms, and wherein the data stored with the optical template file represents the average of
3 the data for each of the forms.

4
5 139. The method of claim 137, further comprising storing a pattern specification in
6 association with the optical template file, wherein the pattern specification is indicative of
7 the structure of the elements within the cluster.

8
9 140. The method of claim 137, wherein the form is selected from the group consisting
10 of an identification card, a driver's license, a social security card, and a passport.

11
12 141. The method of claim 137, further comprising storing the portion of the image file
13 containing a cluster header as cluster header template data associated with the optical
14 template file.

15
16 142. A method for optically analyzing a sequence of symbols using a system
17 containing memory, wherein the set of symbols comprises a plurality of different symbol
18 types, comprising:

- 19 (a) storing a pattern specification in a first memory, wherein the pattern
20 specification is comprised of a sequence of pattern characters, wherein
21 each pattern character corresponds to a symbol type in the sequence of
22 symbols, and wherein each pattern character references data stored in a
23 second memory;
24 (b) optically scanning the sequence of symbols to form an image comprising
25 images of each symbol type, and storing the image in a third memory; and
26 (c) analyzing the image by assessing the image of each symbol type with
27 respect to the data referenced by the corresponding pattern character of the
28 symbol type.

29
30 143. The method of claim 142, wherein the sequence of pattern characters is indicative
31 of the arrangement of the sequence of symbols.

1
2 144. The method of claim 142, wherein each pattern character sequentially
3 corresponds to a symbol type.

4
5 145. The method of claim 142, wherein the referenced data comprises template
6 images.

7
8 146. The method of claim 145, wherein analyzing the image further comprises
9 comparing the template images to the image of each symbol type.

10
11 147. The method of claim 142, wherein at least one pattern character specifies the
12 expected number of symbols in its corresponding symbol type.

13
14 148. The method of claim 142, wherein the symbols are characters.

15
16 149. The method of claim 142, wherein the symbol types are selected from the group
17 consisting of numbers, upper case letter, lower case letters, and punctuation symbols.

18
19 150. A method for optically analyzing a continuous sequence of symbols using a
20 system containing memory containing a plurality of optical templates, comprising:

- 21 (a) optically scanning the sequence of symbols to form an image comprised of
22 a plurality of images of each symbols;
23 (b) determining a first subset of the plurality of templates; and
24 (c) comparing a first subset of the plurality of templates to at least one symbol
25 image to identify that symbol.

26
27 151. The method of claim 150, further comprising comparing a second subset of the
28 plurality of templates to a different symbol image to identify that symbol.

29
30 152. The method of claim 150, wherein determining a first subset of the plurality of
31 templates includes the use of a pattern character.

1
2 153. The method of claim 152, wherein the pattern character is contained within a
3 pattern specification.

4
5 154. The method of claim 152, wherein the pattern character specifies the expected
6 number of symbols in its corresponding symbol type.

7
8 155. The method of claim 152, wherein the pattern character specifies a certain symbol
9 type and wherein the first subset of the plurality of templates correspond to templates for
10 that symbol type.

11
12 156. The method of claim 150, wherein the symbols are characters.

13
14 157. The method of claim 150, wherein the symbols are selected from the group
15 consisting of numbers, upper case letters, lower case letters, and punctuation symbols.

16
17 158. A method for allowing a user to initialize a machine to be connected to a network,
18 comprising in order:

- 19 (a) accessing the network;
20 (b) inputting configuration data for the machine at the network;
21 (c) connecting the machine to the network, whereby the machine
22 automatically establishes a communication channel with the network; and
23 (d) transmitting the configuration data to the machine through the
24 communication channel.

25
26 159. The method of claim 158, wherein accessing the network comprises use of a user
27 interface in communication with the network.

28
29 160. The method of claim 158, wherein the configuration data enables image templates
30 to be sent to the machine from the network.

31

- 1 161. The method of claim 158, further comprising:
- 2 (a) receiving at the network information concerning the status of the machine
- 3 via the communication channel; and
- 4 (b) comparing at the network the received status information with the inputted
- 5 configuration data, wherein the transmitted configuration data is
- 6 dependent on the received status information.
- 7
- 8 162. The method of claim 161, wherein received status information represents software
- 9 for controlling the functionality of the machine, and wherein the transmitted
- 10 configuration data adds to, updates, or deletes at least a portion of the software.
- 11
- 12 163. The method of claim 158, wherein the configuration data enables audit data to be
- 13 sent from the machine to the network.
- 14
- 15 164. The method of claim 158, wherein the machine contains an optical scanning unit
- 16 for receiving a form.
- 17
- 18 165. The method of claim 164, wherein the form is selected from the group consisting
- 19 of a identification card, a driver's license, a social security card, and a passport.
- 20
- 21 166. The method of claim 164, wherein the transmitted configuration data is stored in
- 22 the optical scanning unit.
- 23
- 24 167. The method of claim 158, wherein the machine is selected from the group
- 25 consisting of a vending machine, an automatic teller machine, cash register, and a gas
- 26 pump.
- 27
- 28 168. A method for configuring the functionality of a machine containing an optical
- 29 scanning unit connected to a network, comprising:
- 30 (a) accessing the network using a user interface;

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(b) selecting configuration options for the machine using a graphical user interface; and

(c) transmitting the configuration options to the optical scanning unit in the machine.

169. The method of claim 168, wherein accessing the network comprises use of a user interface in communication with the network.

170. The method of claim 168, wherein the configuration options enable image templates to be sent to the machine from the network.

171. The method of claim 168, wherein the configuration options enable audit data to be sent from the machine to the network.

172. The method of claim 168, wherein the machine contains an optical scanning unit for receiving a form.

173. The method of claim 172, wherein the form is selected from the group consisting of an identification card, a driver's license, a social security card, and a passport.

174. The method of claim 172, wherein the optical scanning unit includes memory for storing the transmitted configuration options.

175. The method of claim 168, wherein the machine is selected from the group consisting of a vending machine, an automatic teller machine, a cash register, and a gas pump.